

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



Office of Pesticide Programs

MEMORANDUM

7/5/2022

SUBJECT: Product Chemistry Review for **Jaguar 5**, EPA Reg. No.: **92082-G**

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TO: John Hebert, PM Team 31 / Emilia Oiguenblik
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Registrant: SRFC Bio, Inc.
Action code: A540
Agency Due Date:
6/23/2022
Case No.: 00350799
Submission No.: 1084105
E-Sub No.: 74249
Classification: EP
Process: Nonintegrated
system
Pesticide type:
Disinfectant

MRID(s): 51874401, 51874402, 51874403, 51874404

Formulation from label			
PC code(s)	CAS #(s)	Active Ingredient(s)	% weight
069149	7173-51-5	Didecyl dimethyl ammonium chloride	0.24
069105	68424-85-1	n-Alkyl (50% C ₁₄ , 40% C ₁₂ , 10% C ₁₆) dimethyl benzyl ammonium chloride	0.16
		Other Ingredients	99.6
		Total	100.0

I. BACKGROUND

The Registrant, SRFC Bio, Inc., has submitted application for pesticide registration for their product: Jaguar 5, EPA Reg. No. 92082-G. This non-food use and end-use product is formulated as a disinfectant.

II. RELEVANT DOCUMENTS

	RECEIVED	N/A
EPA FORM 8570-27 – Formulator’s Exemption Statement (03/29/2022)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
EPA FORM 8570-35 – Data Matrix (3/29/2022)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cover letter (3/29/2022)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmittal document	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed Basic CSF (dated 03/29/2022); Proposed Alternate CSF #1 (dated 03/29/2022); Proposed Alternate CSF #2 (dated 03/29/2022)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed product label (dated 03/29/2022)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Certification for Pilot Fragrance Notification Program	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
REFERENCED: Basic CSF (03/29/2022)	--	
Comments: None.		

III. FINDINGS

a. Product Formulation:

	TGAI	MUP	EUP	Food use	Non-food use
Non-integrated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Integrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Active Ingredients(s)	Nominal		Upper limit	Lower limit	
Didecyl dimethyl ammonium chloride	0.24%		0.26%	0.22%	
n-Alkyl (50% C ₁₄ , 40% C ₁₂ , 10% C ₁₆) dimethyl benzyl ammonium chloride	0.16%		0.18%	0.14%	
Total Quaternary Ammonium Chlorides (QUATs)	0.40%		0.44%	0.36%	

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	YES	NO	N/A
1. The certified limits of all ingredients are within 40 CFR standard certified limits.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Wider certified limits were requested and rationale was accepted.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. The nominal concentration(s) of the active ingredient is in agreement with the label.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The chemical IDs and analytical information for density, pH, and flammability are consistent with Series 830 Group B data.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. All inert ingredients are approved for non-food use pesticide formulations.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The impurities present >0.1% are identified.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Impurities of toxicological significance have an upper certified limit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b. Product Label:

	Yes	NO	N/A
<i>The formula contains one of the following:</i>			
1. 10% or more of petroleum distillate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. 1.0% or more of methyl alcohol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Sodium nitrite at any level	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. A toxic list 1 inert at any level	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Arsenic in any form	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. If yes to 1-5, then the inert ingredient list contains a relevant footnote	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Appropriate warning statements regarding flammability or explosive characteristics of the product are included on the label	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. The storage and disposal instructions for the pesticide container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The product requires an expiration date at which time the nominal concentration falls below the lower certified limit.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IV. Additional Findings

1. Acceptable data were submitted for guideline 830.1800 (enforcement analytical method). The active ingredients are chloride salts of quaternary ammonium compounds (QUATs). Quantitation of the two active ingredients was based on determination of the total QUATs using a two-phase bromophenol blue titration with a standardized sodium dodecyl sulfate solution as the titrant. The method was validated in terms of precision and accuracy.
2. The two alternate CSFs are not numbered (see Box A).
3. Compared to the Basic CSF, Alternate CSF #1 and Alternate CSF #2 contain different registered sources for the active ingredients. The amount of diluent is varied to make up for the 100% accountability on each CSF. The nominal concentrations of the other inert ingredients are the same on all CSFs.
4. A 14-day accelerated storage stability study was conducted on Jaguar 5 (Lot No. 122107J5) at $54 \pm 2^\circ\text{C}$ (MRID No. 51874403). It appears that the test substance was not stored in the packaging provided by the sponsor, but stored directly in an incubator (refer to Page 9 in MRID No. 51874404). The concentration of the total QUATs (% w/w) was determined initially, and after 14 days of storage using titration with sodium dodecyl sulfate. The test substance was also visually examined for any physical changes during the course of the study.

The results showed that the average QUATs content changed slightly from 0.406% before storage to 0.435% after 14 days of storage. Both concentrations **are within the presumed certified limits** (lower limit: 0.44%, upper limit: 0.36%, nominal: 0.40%) for the total QUATs established using the total nominal concentration for the active ingredients listed on the Basic CSF (dated 03/29/2022) and EPA's Standard Certified Limits. No physical changes of the test substance were observed.

5. A 14-day corrosion characteristics study was performed on Jaguar 5 (Lot No. 122107J5) at $54 \pm 2^\circ\text{C}$. The test substance was stored in two types of packaging: white PET spray bottles with caps and white HDPE bottles with HDPE caps. Two of each type of bottle contained the test substance, while one of each type of bottle which did not contain the test substance served as a control. After 14 days of storage, each packaging did not exhibit any changes from baseline other than slight weight variations. The changes in weight for the two PET bottles filled with test substance were - 0.53% and - 0.56%, while those for the two HDPE bottles filled with test substance were - 0.22% and - 0.22%. No physical changes of the test substance were noted for each packaging over the duration of the study.
6. The proposed product label was screened as it pertains to the product chemistry requirements. The final review of the label is the purview of the PM team.

V. Conclusion

1. The proposed Basic CSF (dated 03/29/2022) and Alternate CSFs #1 - #2 (both dated 03/29/2022) are acceptable.
2. The guideline 830.1900 (submittal of samples) was not addressed.
3. The data submitted for the other Group A guidelines are acceptable.
4. The data submitted for the other Group B guidelines are acceptable.

VI. Table A:
Series 830 guidelines – Group A

OCSPP#	Name	Status	MRID
830.1550	Product Identity & Composition	Acceptable	51874401
830.1600	Description of materials	Acceptable	51874401
830.1620	Description of production process	Not applicable, non-integrated	N/A
830.1650	Description of formulation process	Acceptable	51874401
830.1670	Discussion of formation of impurities	Acceptable	51874401
830.1700	Preliminary analysis	Not applicable, non-integrated	N/A
830.1750	Certified limits	Acceptable	MRID No. 51874401, Basic CSF (dated 03/29/2022), Alternate CSFs #1 - #2 (both dated 03/29/2022)
830.1800	Enforcement analytical method	Acceptable	51874402
830.1900	Submittal of samples	Data gap	

VII. Table B: Series 830 guidelines – Group B

OCSP#	Name	Study Findings/Comment	Status	MRID
830.6302	Color	Not required for end use product	Not applicable	N/A
830.6303	Physical state	Liquid	Acceptable	51874403
830.6304	Odor	Not required for end use product	Not applicable	N/A
830.6313	Stability to normal & elevated temperatures, metals & metal ions	The product is not TGA.	Not applicable	N/A
830.6314	Oxidation/Reduction	The product was found to be compatible with water, carbon dioxide, iron powder, and gasoline, and 1% sodium hypochlorite.	Acceptable	51874403
830.6315	Flammability	Flash point: > 100°C	Acceptable	51874403
830.6316	Explodability	The product does not contain explosive components.	Not applicable	N/A
830.6317	Storage stability	The product was found to be stable when stored in an incubator (not the commercial packaging) at 54 ± 2°C for 14 days.	Acceptable	51874404
830.6319	Miscibility	The product will not be diluted with petroleum solvents.	Not applicable	N/A
830.6320	Corrosion characteristics	No signs of corrosion were noted on the two types of packaging material during the 14-day corrosion characteristics study at 54 ± 2°C.	Acceptable	51874404

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OCSP#	Name	Study Findings/Comment	Status	MRID
830.6321	Dielectric breakdown voltage	The product will not be used around electrical equipment.	Not applicable	N/A
830.7000	pH	4.4 at 21.5°C (neat)	Acceptable	51874403
830.7050	UV/Visible absorption	Not required for MUP or EP	Not applicable	N/A
830.7100	Viscosity	1.201 cSt at 20°C; 0.792 cSt at 40°C	Acceptable	51874403
830.7200	Melting point	Not required for MUP or EP	Not applicable	N/A
830.7220	Boiling point	Not required for MUP or EP	Not applicable	N/A
830.7300	Density/relative	Specific gravity: 0.998 at 22°C	Acceptable	51874403
830.7370	Dissociation constants in water	Not required for MUP or EP	Not applicable	N/A
830.7520	Particle size	Not required for MUP or EP	Not applicable	N/A
830.7550/ 7560/ 7570	Partition coefficient	Not required for MUP or EP	Not applicable	N/A
830.7840/ 7860	Water solubility	Not required for MUP or EP	Not applicable	N/A
830.7950	Vapor pressure	Not required for MUP or EP	Not applicable	N/A